MATH 2312 - Precalculus – Fall 2018
Course Syllabus

Course Information

Section	Time	Instructor	Room
2312.001	Mon, Wed, & Fri : 10:00am - 10:50am	Dr. Kelly Aman	CB3 1.306
2312.002	Mon, Wed, & Fri : 11:00am - 11:50am	Dr. Yong Chen	CB3 1.306
2312.003	Mon, Wed, & Fri : 12:00pm - 12:50pm	Dr. Kelly Aman	FO 2.702
2312.004	Mon, Wed, & Fri : 1:00pm – 1:50pm	Dr. Yong Chen	FO 2.702
2312.005	Mon, Wed, & Fri : 2:00pm – 2:50pm	Dr. Chen Jia	FO 2.702
2312.006	Mon, Wed, & Fri : 3:00pm - 3:50pm	Dr. Chen Jia	FO 2.404

Professor Contact Information

Dr. Kelly Aman Kelly.Aman@utdallas.edu
FO 2.110 972-883-6588
Hours: MWF 11am - 11:50am, or by appointment

Dr. Yong Chen Yong.Chen1@utdallas.edu
RL 4.712 **972-883-2528**
Hours: W 3:00pm - 5:00pm

Dr. Chen Jia jiac@utdallas.edu
FN 2.206
Hours: F 9am - 11am

Course Pre-requisites, Co-requisites, and/or Other Restrictions

A test score of 480 on the SAT II Mathematics Level IC exam or a grade of at least a C- in MATH 1314 and MATH 1316 or equivalent courses.
The goal of this course is to provide the student with an understanding of algebraic, exponential, logarithmic, trigonometric and inverse trigonometric functions. Additionally, the successful student will gain proficiency in the algebraic manipulation required to succeed in Calculus.

Course Description

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Student Learning Objectives/Outcomes

1. Students will evaluate functions, determine their domains, and be able to find the inverse function if one exists.
2. Students will perform algebraic operations with polynomial and rational functions, and determine the domains and asymptotes of rational functions.
3. Students will evaluate and recognize exponential and logarithmic functions, and use their properties to solve exponential and logarithmic equations.
4. Students will evaluate trigonometric functions, use fundamental trigonometric identities, and evaluate inverse trigonometric functions.
5. Students will solve systems of linear equations

Required Textbooks and Materials

MyMathLab Access Code - This code provides access to the online homework, and an online copy of the textbook. This is required, but is included if you purchase one of the physical copies of the text. This code can be purchased directly through the MyMathLab site.

Textbook - If you want a physical copy of the book there are two options available: loose leaf, or hardcover. The loose leaf version is the entire book, but with no binding.

Title: Precalculus, 10th ed.
Author: Sullivan
ISBN (loose leaf): 9780134026640
ISBN (hardcover): 9780321978981

IMPORTANT DATES AND HOLIDAYS

Labor Day	Monday, Sept. 3
Census (last day to drop without record)	Wednesday, Sept. 5
Last day to drop (requires instructor approval)	Monday, Nov. 5
Fall Break and Thanksgiving	Nov.19 - 25
Last Day of Classes	Saturday, Dec.8
EXAM I	Thurs, Oct. 4, 8:30 - 9:45pm
EXAM II	Thurs, Nov 8, 8:30 - 9:45pm
FINAL	TBD week of Dec. 11 - 17

Grading Policy

Your final class average will be determined based on the following weighting:

- **Homework 25%**
- **Take-home Quizzes 15%**
- **Attendance 5%**
- **Lower of Exam 1 and 2 15%**
- **Higher of Exam 1 and 2 20%**
- **Final Exam 20%**

Grading Scale:

[96.5, 100]	[92.5, 96.5)	[89.5, 92.5)	[86.5, 89.5)	[82.5, 86.5)	[79.5, 82.5)	[76.5, 79.5)
A+	A	A -	B+	B	B -	C+
[72.5, 76.5)	[69.5, 72.5)	[66.5, 69.5)	[62.5, 66.5)	[59.5, 62.5)	[0, 59.5)	
C	C -	D+	D	D -	F	

Course & Instructor Policies

Homework: Weekly digital homework assignments (DHW) will be posted in Pearson MyLab on a weekly basis and usually be due by 11:59pm Monday of the following week.

Quizzes: Take home quizzes (THQ) will be given regularly throughout the semester. These will be posted as PDF files on our elearning homepage. You will need to print out the PDF, complete the problems on it, staple it if needed, and turn it in **at the start of class** on the day it is due.

Exams: The exams will be held on Thursday evenings (except possibly the final). These are free-response, and paper for them will be provided. All you will need to bring is something to write with.

Attendance: Attendance will be taken. Up to three unexcused absences are allowed; each absence after that will reduce your semester grade by 1%/

Calculator: A scientific calculator is optional and is permitted on exams and quizzes. Graphing calculators, phones, or other electronic devices are NOT ALLOWED on quizzes or exams.

Course Schedule (subject to change)

Date	Topics
Aug 20	Syllabus, MyMathLab, 1.1 Distance and Midpoint Formulas
Aug 22	1.1 (cont.), 1.2 Graphs of Equations, 1.4 Circles
Aug 24	1.3 Lines
Aug 27	2.1 Functions
Aug 29	2.1 cont., 2.2 The Graph of a Function
Aug 31	2.3 Properties of Functions
Sept 3	**Labor Day**
Sept 5	2.4 A Library of Parent Functions, 2.5 Graphing Techniques: Transformations
Sept 7	3.3 Quadratic Functions and Their Properties
Sept 10	4.1 Polynomial Functions
Sept 12	A3-A4 Polynomial Division and Synthetic Division, start 4.2
Sept 14	4.2 Properties of Rational Functions
Sept 17	4.3 Graphs of Rational Functions
Sept 19	4.4 Polynomial and Rational Inequalities
Sept 21	4.5 The Real Zeros of a Polynomial Function
Sept 24	5.1 Composite Functions, 5.2 One-to-one and Inverse Functions
Sept 26	5.2 cont. 5.3 Exponential functions, 5.4 Logarithmic Functions
Sept 28	5.4 cont. 5.5 Properties of Logarithms
Oct 1	5.6 Solving Exponential and Logarithmic Equations
Oct 3	Exam 1 Review, **Exam 1 THURS at 8:30pm**
Oct 5	6.1 Angles and their Measures
Oct 8	6.2 Trigonometric Functions: Unit Circle Approach
Oct 10	6.2 cont.
Oct 12	6.3 Properties of Trigonometric Functions
Oct 14	6.4 Graphs of Sine and Cosine Functions
Oct 17	6.4 cont., 6.5 Graphs of Tangent, Cotangent, Secand, and Cosecant.
Oct 19	6.5 cont.
Oct 22	7.1 Inverse Sine, Cosine, and Tangent Functions
Oct 24	7.2 Inverse Trigonometric Functions Continued, 7.3 Trigonometric Equations
Oct 26	7.3 cont.
Oct 29	7.4 Trionometric Identities
Oct 31	7.5 Sum and Difference Formulas
Nov 2	7.6 Double and Half Angle Formulas
Nov 4	9.1 Polar Coordinates
Nov 7	Exam 2 Review, **Exam 2 THURS at 8:30pm**
Nov 9	9.2 Polar Equations and Graphs
Nov 12	9.2 cont.
Nov 14	9.4 Vectors
Nov 16	9.4 cont.
Nov 19	
Nov 21	**Fall Break / Thanksgiving**
Nov 23	
Nov 26	10.2 The Parabola
Nov 28	10.3 The Ellipse
Nov 30	10.4 The Hyperbola
Dec 3	11.1 Solving Systems of Equations with Substitution and Elimination
Dec 5	11.1 cont.
Dec 7	Final Exam Review

eLearning and MyLab

This course uses the UTD eLearning system to distribute content, send out announcements, and track grades. Go to http://elearning.utdallas.edu and login using your net ID and password. You should see a link for MATH 2312.**701** - Precalculus. Follow this link and you will be taken to our course homepage, which contains a link to **Pearson MyLab.** The first time you follow this link you will be asked for an **Access Code**. If you purchased the textbook from the bookstore, you should already have an access code. If not you can purchase an access code directly when asked for it

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Technical Support

If you experience any problems with your UTD account you may send an email to: assist@utdallas.edu or call the UTD Computer Helpdesk at 972-883-2911.

SI Sessions

Supplemental Instruction (SI) is offered for this course. SI sessions are free group study opportunities, scheduled two or three times per week. Sessions are facilitated by an SI Leader, who has recently taken the course and received a high final grade. Attendance is voluntary. For information about the days, times, and locations for SI sessions, refer to http://www.utdallas.edu/studentsuccess/leaders/si.html.

Additional Resources

The Student Success Center **Math Lab** offers *free* help in math, physics and statistic courses to UT Dallas students currently enrolled in classes. The Math Lab is staffed by tutors and learning specialists. We are open Monday - Thursday 11am-7pm through August 13. Students can:

- Drop by our Walk-in Lab in MC 3.606
- Contact the Math Lab with questions or comments: 972 – 883 – 5480 or mathlab@utdallas.edu

SWE-Society of Women Engineers: http://swe.utdallas.edu/
NSBE-National Society of Black Engineers: http://www.utdallas.edu/orgs/nsbe/nsbehome.htm